

REMARKS

Status of the claims:

With the above amendments, claim 5 has been canceled, claim 26 has been added, and claims 1, 3-4, 7, 9-11, 13-14, and 16-26 are pending and ready for further action on the merits. No new matter has been added by way of the above amendments. Support for new claim 26 can be found at paragraph [0005], [0025], [0033], and [0046] as well as elsewhere throughout the detailed description and original claims. Claim 26 presents no new issues that require further search and consideration. Claim 26 is the same as claim 1, except that the preamble has the word “damping” in it. Reconsideration is respectfully requested in light of the following remarks.

Examiner Interview

Applicants’ representatives would like to thank the Examiner for holding a telephonic interview on February 8, 2007. No agreement was reached in the interview. The cited art and unexpected properties of the present invention were discussed.

Rejections under 35 U.S.C. § 103

Claims 1, 3-5, 7, 9, 11, 13-14, 16-20 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivin ‘304 (US Patent No. 5,322,304).

Claims 10 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivin ‘304 in view of Slocum ‘126 (US Patent No. 6,280,126),

Applicants traverse.

Applicants assert that the Examiner has failed to establish a proper *prima facie* case of obviousness for either of the above-enumerated rejections. To establish a proper *prima facie* case of obviousness, three basic criteria must be met.

- 1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.
- 2) There must be a reasonable expectation of success.
- 3) The prior art reference (or references when combined) must teach or suggest all the claim limitations.

See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2142.

Applicants submit that the Examiner has failed to show any of these criteria. For example, the Examiner has failed to show criteria 1) that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

In this regard, Applicants direct the Examiner's attention to *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) that holds that if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification (See also MPEP 2143.01 V.).

Applicants respectfully submit that the purpose of Rivin '304 is to create a better fit for a conical envelope in a conical seat. At column 2, lines 3-8, Rivin '304 states:

According to the invention, the conical envelope is resilient so as to allow simultaneous seating of the conical envelope in the conical seat and seating of the clamping surface on the clamping seat irrespective of the tolerances between the conical seat and the clamping seat.

This passage describes that Rivin '304 is attempting to allow for better seating of the conical envelope in the conical seat (*i.e.*, a better fit) while not concerning its invention with tolerances (such as damping) between the conical seat and clamping seat. The intended purpose of Rivin '304 is to achieve a better fit irrespective of the tolerances such as damping. Additionally, the invention of Rivin '304 fills its voids or depressions either with material 64¹ or spherical balls² used to secure a better fit.

Accordingly, if one were to allow machined depressions in Rivin '304 as the Examiner asserts is obvious, then the purpose of a good fit of the conical envelope in the conical seat in Rivin '304 would be destroyed. If the purpose of Rivin '304 is destroyed, as a matter of law, Rivin '304 cannot render *prima facie* obvious the present invention (see the holding of *In re Gordon*).

Further, the Examiner has failed to show criteria 3) that the prior art reference when combined teach or suggest all the claim limitations. "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). As found in the Office Action dated 11/24/06, the Examiner states:

[I]t is noted that the features upon which applicant relies (*i.e.*, that the present invention has "unexpectedly superior damping properties") are not recited in the rejected claims(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

See Office Action on page 8, paragraph 29. By analogy to the chemical arts, if a compound has an inherent property, an applicant does not have to include the property as a limitation within the

¹ See Rivin '304 at col. 10, line 4-15 stating "[m]aterial 64 may as to each embodiment, be arranged effectively fill out the voids in the conical envelope."

² See Rivin '304 at col. 6, line 66 to col. 7, line 3 stating "[t]wo axially spaced annular rows of holes 48c are provided in the shell portion 48b with each hole sized, as best seen in FIG. 7, to accommodate a ball 46 while allowing the outer periphery of the ball to project outwardly beyond the outer periphery of the shell portion."

body of the claim. The limitation is inherent to the claimed compound. As in the present case, Applicants assert that the superior damping properties are inherent in the structure as claimed; therefore, there is no need to include such language within the body of the claims as the Examiner asserts as necessary.

Neither embodiment in Rivin '304, Figures 5-7 or Figures 9-11, suggest or teach an apparatus with superior damping properties. In fact, each embodiment teaches away from an apparatus that inherently possesses superior damping properties. As discussed above, Rivin '304 instead suggests or teaches an apparatus with a better fit of a conical envelope in a conical seat. As was shown in the 37 CFR 1.132 declaration that was filed with the Response of September 15, 2006, an increase in the force between one surface and another (leading to a better fit) causes a decrease in damping effects.

Claim 26

Thus, even if *arguendo*, Rivin '304 or the combination of Rivin '304 and Slocum '126 were available to make the present invention *prima facie* obvious, which Applicants do not concede, the present invention does not teach or suggest a damping apparatus as claimed in claim 26, which recites:

26. *A damping apparatus comprising:
a first element adapted to be coupled with a second element, the first element comprising a structured surface and the second element comprising a second surface, wherein the second surface comprises a receiving surface and wherein the structured surface comprises a plurality of depressions wherein the depressions are formed by machining.*

Claim 26 has been entered into the application claiming a "damping apparatus." The presence of damping in the preamble further distinguishes the present invention over Rivin '304 and/or the combination of Rivin '304 and Slocum '126. "If the claim preamble, when read in the context of

the entire claim, recites limitations of the claim, or, if the claim preamble is ‘necessary to give life, meaning, and vitality’ to the claim, then the claim preamble should be construed as if in the balance of the claim.” *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999).

Applicants direct the Examiner’s attention to *Kropa v. Robie*, 187 F.2d 150, 88 USPQ 478 (CCPA 1951). As found in the MPEP § 2111.02, the *Kropa v. Robie* court stated:

A preamble reciting “An abrasive article” was deemed essential to point out the invention defined by claims to an article comprising abrasive grains and a hardened binder and the process of making it. The court stated “it is only by that phrase that it can be known that the subject matter defined by the claims is comprised as an abrasive article. Every union of substances capable inter alia of use as abrasive grains and a binder is not an ‘abrasive article.’” Therefore, the preamble served to further define the structure of the article produced.

See MPEP §2111.02 (citing *Kropa*, 187 F.2d at 152, 88 USPQ at 481). Much like the invention in *Kropa v. Robie*, the phrase “damping apparatus” in the present invention is the way it can be known that the subject matter defined by the claims is comprised as a damping apparatus. The introductory language points out an express limitation upon the invention to define the present invention. The damping apparatus phrase can be necessary to give life, meaning, and vitality to the claim. Moreover, the preamble in claim 26 distinguishes it from the Rivin ‘304 embodiments, which are designed to fit better and not to be a damping apparatus. As a matter of fact, the Rivin ‘304 embodiments are not effective damping apparatuses, as was shown in the 37 CFR 1.132 declaration that was filed with the Response of September 15, 2006. Additionally, Figures 6 and 7 of the present invention, along with the paragraphs [0046] and [0047], show the effectiveness of the damping apparatus of the present invention as compared to a conventional apparatus in the art.

Claims 24 and 25

Further Rivin '304 and/or Slocum '126 do not teach or suggest a non-uniform pattern of depressions on the structured surface. Claim 24 and 25 contain claim limitations of non-uniform structure. In fact, Rivin '304 teaches away from a non-uniform layout of the depressions. In Col. 7, lines 12-14, Rivin '304 states that "[t]he balls 46 in each row are spaced apart by approximately equal angular distances." Rivin '304 further states in Col. 7, lines 23-29 that

Since the contact points of all of the balls in any given row are at the same radial distance from the tool holder axis 50, an initial asymmetrical positioning of the tool holder in the spindle would result in uneven deformation of the collar cantilever portions 42c/44c via the balls 46 and the ensuing unbalance forces would restore the precise concentricity of the tool holder with respect to the spindle.

These passages disclose the criticality that Rivin '304 places on the uniform pattern of the depressions and their corresponding balls in order to balance the apparatus of Rivin '304. The balancing of the apparatus creates a better fit which is the purpose of Rivin '304. Further, Rivin '304 does not suggest or teach modifying the uniform pattern of the depressions to reach a non-uniform pattern. While in some instances, as the Examiner views in the Office Action, it may be a routine skill in the art to rearrange parts of the invention,³ no where is it taught or suggested in Rivin '304 to do so to achieve superior damping effects. Further, modifying Rivin '304 by rearranging the depression to a non-uniform pattern would render the invention in Rivin '304 being modified unsatisfactory for its intended purpose of creating a good fit; therefore, there is no suggestion or motivation to make the proposed modification.

Unexpected Properties

Thus, even if *arguendo*, Rivin '304 were available to make the present invention *prima facie* obvious, which Applicants do not concede, the present invention has unexpectedly superior

³ See Office Action, page 6, paragraph 25.

properties that renders it patentable over either or both of Rivin '304 and/or Slocum '126. For example, the present invention has damping properties that are neither contemplated nor taught by either of Rivin '304 and/or Slocum '126. "Evidence that a compound is unexpectedly superior in one of a spectrum of common properties...can be enough to rebut a *prima facie* case of obviousness." *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987). In the present case, the claimed invention has unexpected superior damping effects (a common property in the art) over embodiments in the prior art; such effects or properties are enough to rebut the *prima facie* case of obviousness.

By having depressions that are machined (as claimed), the present invention has increased damping properties (*i.e.*, the damping properties are better). As was discussed above, the purpose of Rivin '304 is to create a better fit for a conical envelope in a conical seat. When a better fit is created, the damping properties decrease (*i.e.*, there is less damping). Again, as was shown in the 37 CFR 1.132 declaration that was filed on 09/15/06, an increase in the force between one surface and another (leading to a better fit) causes a decrease in damping effects.

Further, Applicants are not required to compare the claimed invention with subject matter that does not exist in the prior art. *In re Geiger*, 815 F.2d 686, 689, 2 USPQ2d 1276, 1279 (Fed. Cir. 1987) (Newman, J. concurring). The proper test for unexpected properties requires Applicants to compare the claimed invention to the closest embodiment in the prior art. As applicable to this case, the comparison would be made to either the apparatus represented by Figures 5-7 or the apparatus represented by Figures 9-11, not a combination of Figures 5-7 and Figures 9-11. Any combining of embodiments found within different inventions in the art is not a proper application of the standard to determine whether a claimed invention exhibits superior properties over the prior art. As best stated in *In re Chapman*, 357 F.2d 418, 422, 148 USPQ

711, 714 (CCPA 1966), “[r]equiring applicant to compare claimed invention with polymer suggested by the combination of references relied upon in the rejection of the claimed invention under 35 U.S.C. 103 ‘would be requiring comparison of the results of the invention with the results of the invention.’”

By having depressions that are machined (as claimed), the present invention has increased damping properties (*i.e.*, the damping properties are better). This increased damping effect is shown in Figures 6 and 7 in the written description and was further enumerated in the 1.132 declaration that was filed with the response of 09/15/06. Neither embodiment of Rivin ‘304 considered individually discloses an apparatus of the present invention with depressions that are machined. As was discussed above, the purpose of Rivin ‘304 is to create a better fit for a conical envelope in a conical seat. Slocum ‘126 fails to make up for the deficiencies in Rivin ‘304. Accordingly, neither of Rivin ‘304 or Slocum ‘126 individually or together can render obvious the present invention. Additionally, assuming *in arguendo*, a *prima facie* obviousness were presented, the unexpected superior damping effect rebuts the case of *prima facie* obviousness. Withdrawal of the rejections is warranted and respectfully requested.

CONCLUSION

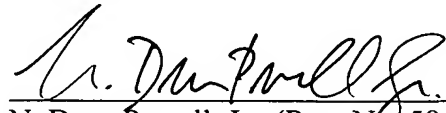
With the above amendments and remarks, Applicants believe that all objections and/or rejections have been obviated. Thus, each of the claims remaining in the application is in condition for immediate allowance. A passage of the instant invention to allowance is earnestly solicited.

Applicants believe that no additional fee is necessary, however, should a fee be deemed to be necessary, the Commissioner is hereby authorized to charge any fees required by this action or any future action to Deposit Account No. 16-1435.

Should the Examiner have any questions relating to the instant application, the Examiner is invited to telephone the undersigned at (336) 607-7347 to discuss any issues.

Respectfully submitted,

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